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REMARKS

Claims 31-38 and 40-45 are pending in this application, with claims 1-30 and 39 having previously been canceled without prejudice or disclaimer. Claim 38 has been withdrawn by the Patent Office from examination. By the present Amendment, claim 33 has been amended to correct an informality therein. Claims 31-38 and 40-45 remain pending upon entry of this Amendment, with claim 31 being the sole pending claim in independent form.

Claims 31-37, 40-43 and 45 were rejected under 35 U.S.C. § 102(a) and § 102(b) as purportedly anticipated by Sugimura (JP 2003-53953). Claim 44 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sugimura in view of Maki et al. (US 2002/0126193 A1).

The rejections are apparently based on an interpretation of Sugimura that fails to take into consideration of a specific proposal of Sugimura.

As previously pointed out in the record, applicant respectfully submits that the cited art does not disclose or suggest the aspects of the present application that a state detector that detects presence of the recording medium along a moving line of the carriage is provided on an upstream side of the carriage in a feed direction of the recording medium, and the printing operation is started in a subsequent main-scanning after the recording medium is conveyed and the state detector *detects an edge of the recording medium while scanning the carriage in the main-scanning direction in a current main-scanning*, and a controller receives detection information from the state detector when the state detector detects the edge of the recording medium in the main-scanning direction for each main-scanning of the carriage, and the controller determines therefrom a position of the edge of the recording medium for the printing operation of a subsequent line.

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The premise of the rejections in the Office Action is that Sugimura must be read in a manner such that there would be no backward (that is, relative to normal paper conveyance direction) movement of the paper. More specifically, it is contended in the Office Action, page 8, second paragraph (lines 4-19), as follows:

...

Sugimura fails to disclose any further feeding of the paper between the disclosed operation of conveying until detection, and in consideration of the time lag, feeding and printing by the heads. It is not possible for the recording paper to be fed in the upstream or backwards direction prior to printing without feeding the printing position past the printing heads 101. If the paper is fed in the upstream direction (direction opposite from arrow of fig. 8) after it is conveyed to the point where it is detected (where the edge P is beneath sensor 20), then none of the nozzles will be positioned over the printing paper during a subsequent print operation. Therefore, since Sugimura fails to disclose step iii set forth by the applicant, the retreating of the record paper P is a feeding operation in the downstream direction to place the position of the edge sensed by the sensor 20 over the recording heads by feeding in the amount d2. Additionally, there is no reason to feed the paper past the printing heads and then reverse feed the paper to be aligned with the printing heads. Therefore one of ordinary skill in the art would not interpret Sugimura in the manner set forth by the applicant. Rather, Sugimura must operate in the manner described in the response to arguments in the prior rejection.

Thus, according to the Office Action: "it is not possible for the recording paper to be fed in the upstream or backwards direction prior to printing ..."

However, such allegedly impossible approach is precisely what Sugimura proposes. More specifically, such contention in the Office Action ignores the proposal in paragraph [0067] of Sugimura (reproduced below):

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"[0067] In the inkjet printer 10 of FIG. 8, when the recording paper P is conveyed and the recording paper P is detected by the sensor 20, the recording paper P is moved rearward once and is printed by the ink head 101 in consideration of a time lag due to the distance d2 between the center position of the sensor 20 and the end of the inkjet head 101."

It is noted that even in the machine translation of Sugimura entered by the Examiner in the record, paragraph [0067] of Sugimura states:

"[0067] If the record paper P is conveyed and the record paper P is detected by the sensor 20, in consideration of the time lag by the distance d2 of the center position of the sensor 20, and the end of the ink head 101, the record paper P will once retreat and will be printed by the ink head 101."

The aforementioned contention in the Office Action does not reconcile the statement in the machine translation of Sugimura that "the record paper P will once retreat ..."

Applicant maintains that "once retreat" in the machine translation of paragraph [0067] of Sugimura really means "moved rearward once."

In any event, "once retreat" in the machine translation of paragraph [0067] of Sugimura simply does NOT mean "feed the paper in the downstream/forward/feed direction".

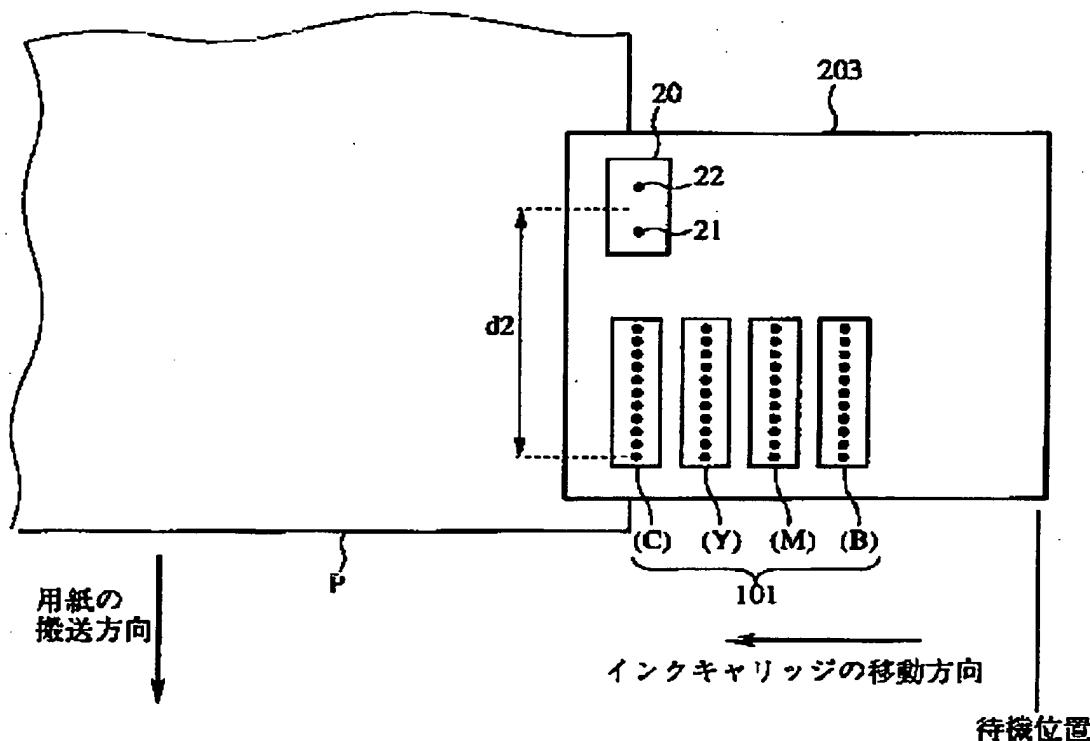
Such understanding of paragraph [0067] of Sugimura is supported and indeed visually confirmed by Fig. 8 of Sugimura, reproduced below. It is noted that the end detected by the sensor is the end of the paper in a cross direction (from right to left, which is the direction the carriage bearing the sensor and inkjet head is moved, in Fig. 8), and further that it is the assumption in Sugimura as reflected in the Fig. 8 that when the sensor (while moving in the cross direction) has reached and detected such end of the paper in the cross direction, the front edge (that is, in the paper conveyance direction, from top to bottom in Fig. 8) of the paper has already passed the first nozzle in the inkjet head. Such assumption is reasonable because it is the

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carriage, and not the paper, that is moving in the cross direction.

【図8】



Accordingly, one skilled in the art, with the benefit of visual confirmation via Fig. 8, would deem it reasonable that Sugimura would propose moving the paper rearward (that is, bottom to top in Fig. 8) to align the front edge of the paper with the first nozzle of the inkjet head, in order to perform borderless printing, as is the objective in Sugimura.

Accordingly, since Sugimura proposes that the recording paper is moved rearward once, Sugimura clearly proposes to print at the current line in one main scanning operation, when the end of the paper is detected.

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Applicant submits that the cited art (including Maki, which has been amply discussed in the record), even when considered along with common sense and common knowledge to one skilled in the art, does **NOT** render unpatentable the aforementioned aspects of the present application.

Accordingly, applicant respectfully submits that independent claim 31 and the claims depending therefrom are allowable over the cited art.

In view of the remarks hereinabove, applicant submits that the application is now allowable, and earnestly solicits the allowance of the application.

If the Examiner can suggest an amendment that would advance this application to condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any required fees in connection with this amendment, and to credit any overpayment, to our Deposit Account No. 03-3125.

Respectfully submitted,



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